

**The Centre for the Study of Manuscript Cultures (CSMC)**  
cordially invites you to the workshop

**Lost and Found Manuscripts:  
Binding ‘Waste’ and Interdisciplinary Methods of Research**

Wednesday, 22 June 2022, 2:30 pm – 6:15 pm CEST  
Thursday, 23 June 2022, 2:30 pm – 6:15 pm CEST

**Online Event**

Registration:

<https://www.csmc.uni-hamburg.de/en/register-workshop24>

The term ‘binding waste’ encompasses any number of written artefacts that were reused (as pastedowns, sewing guards, spine linings, coverings, etc.) to construct a new codex. This practice of reusing documents and book fragments was often a highly meaningful practice that went well beyond mere ‘waste recycling’, allowing us to observe how new users ascribed new meanings to them. Importantly, reuse practices have preserved the texts and objects that illuminate changing reading practices, literary tastes, and documentary cultures. Yet, researchers of such practices and artefacts face unique material and methodological challenges. Most obviously, the reused materials’ original context — e.g., geographical provenance, evidence of users, even text identification — was obfuscated when manuscript producers transformed the remnants of now-lost volumes or document collections into the structural components of new codices. Often, the context is doubly obscured because 19th- and 20th-century users extracted the reused material from codices to access texts that would have otherwise remained hidden, without adequately documenting the deconstruction process. A major challenge for the field is thus to continue developing non-invasive methods to study reuse practices, identify new texts, and reconstruct objects.

This workshop gathers together scholars from the physical sciences and the humanities to generate dialogue on the challenges posed by reused binding material, as well as some of the existing solutions. It comes at a time when the field is experiencing exciting developments. Libraries, for example, are rapidly cataloguing and digitizing the binding fragments in their collections, making it possible to digitally reunite countless disparate fragments. Methods are being developed to discern the original context of disbound fragments from the few remaining clues. Scientists, meanwhile, are repurposing existing technologies — such as CT and micro-CT scanning, infrared thermography (IRT), and macro X-ray fluorescence (XRF) spectroscopy — to enable scholars to read the fragments’ text non-invasively through the exterior binding. This workshop aims to bring these interdisciplinary approaches together to gauge the state of the field and develop new avenues of research.

## Programme

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**Wednesday, 22 June 2022, 2:30 pm – 6:15 pm**

2:30 – 2:45                      Welcome and opening remarks

**Session 1                      2:45 pm – 4:15 pm**

Chair: Eliana Dal Sasso (Hamburg)

2:45 – 4:15                      Fulvio Mercuri (Rome)  
*Thermographic detection and characterization of hidden texts  
in bookbinding*

Ilaria Vezzosi (Bologna/Parma)  
*A hidden library of fragments and its conservation, a case study*

4:15 – 4:45                      Break

**Session 2                      4:45 pm – 6:15 pm**

Chair: Karin Scheper (Leiden)

4:45 – 6:15                      Jessica Lockhart (Toronto)  
*From binding waste to birchbark codex: Applications of micro-  
CT for non-invasive manuscript study*

Ivana Dobcheva (Vienna)  
*Working with fragments in the digital age: A study of the early  
Carolingian scriptorium of Mondsee*

**Thursday, 23 June 2022, 2:30 pm - 6:15 pm**

**Session 3**

**2:30 pm – 4:00 pm**

Chair: Alessandro Bausi (Hamburg)

2:30 – 4:00

Andreas Janke (Hamburg), Claudia Colini (Hamburg), and  
Kyle Ann Huskin (Hamburg)

*Don't judge a bookbinder by his covers! What else can MSI say  
about reused music fragments?*

Eliana Dal Sasso (Hamburg)

*Uncovered manuscript fragments: the effect of text-centred  
interest on the preservation of Coptic binding*

4:00 – 4:30

Break

**Session 4**

**4:30 pm – 6:15 pm**

Chair: Konrad Hirschler (Hamburg)

4:30 – 6:00

Brent Seales (Kentucky) and Christy Chapman (Kentucky)  
*Virtual unwrapping as an approach to in-situ analysis of text  
within bindings*

Olga Soledad Bohdziewicz (Buenos Aires) and Marcela Borelli  
(Buenos Aires)

*Manuscript fragments from Buenos Aires metropolitan area*

6:00 – 6:15

Closing remarks

## Abstracts and Contributors

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### **Olga Soledad Bohdziewicz (Buenos Aires) and Marcela Borelli (Buenos Aires)**

*Manuscript fragments from Buenos Aires metropolitan area*

Thursday, 23 June, 4:30 pm – 6:15 pm

Unlike the case of the holdings of ancient prints and manuscripts from many European libraries that would justify the creation of a research project on fragments on their own, Argentina's library holdings are small and scattered in a vast territory. Hence, the creation of a research project in fragmentology needs to take into consideration many libraries, museums and archives from the most diverse origins. The purpose of this paper is to show the results of our ongoing research explaining the methodology used and the preliminary conclusions we have arrived at. In this stage of our research, we will concentrate exclusively on the metropolitan area of Buenos Aires, since this area has the highest number of ancient book and manuscript repositories. In the long term, however, we intend to include all the institutions in the country.

We will also mention the difficulties that an enterprise of this sort signifies amidst the precarity of national research projects. The scarcity of funding implies that the results of our research will not be made visible through national online platforms but only through research journals. Instead, we rely on international online laboratories, which gives us the space to do so.

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### **Ivana Dobcheva (Vienna)**

*Working with fragments in the digital age:*

*A study of the early Carolingian scriptorium of Mondsee*

Wednesday, 22 June, 4:45 pm – 6:15 pm

The Benedictine Abbey St. Michael in Mondsee was among the oldest monastic houses in Austria. Uncial manuscripts datable to the second half of the eighth century suggest the existence of a scriptorium with highly trained scribes and artists already in this period. Most of these early manuscripts did not survive to the present day. From the 23 Mondsee early Carolingian manuscripts, 15 are preserved only in the form of fragments.

In this talk I shall first shortly present the results from a past two-year project led by the Austrian National Library during which we were able to identify, digitise and provide initial descriptions of all Mondsee fragments whether detached or in situ. My present study on the Carolingian scriptorium of Mondsee builds upon previous scholarship by looking at the newly discovered material. The study combines classical and digital methods for analysing codicological and palaeographical features as well as non-invasive chemical analysis of the writing materials. The interdisciplinary methods will provide the means to reexamine the material and detect new characteristics of the Mondsee book production. This will, on the one hand, allow for written documents with till now uncertain origin to be recognised as products of the Mondsee scriptorium; on the other hand, it will be also possible to examine the development of the written culture in Mondsee, accounting for the influences of foreign monastic centres both in terms of writing materials as well as of transmission and reception of texts.

**Andreas Janke, Claudia Colini, Kyle Ann Huskin (Hamburg)**

*Don't judge a bookbinder by his covers! What else can MSI say about reused music fragments?*

Thursday, 23 June, 2:30 pm – 4:00 pm

Manuscripts with polyphonic music of the 14th and early 15th centuries remain highly sought after, regardless of how much their materiality and legibility have changed through reuse. The study of the content of such manuscripts is greatly enriched by the use of non-invasive techniques such as multispectral imaging (MSI). However, the image data collected by MSI regularly contain not only information about the content of the manuscripts, but also provide new insights into their materiality. Therefore, it is of particular benefit to re-examine existing MSI data with novel questions.

In particular, we will reconstruct the biographies of two music fragments as they encountered the bookbinder Mathias of Vienna, the librarians at the Stadtbibliothek of Nuremberg, and engaged readers or would-be thieves.

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**Jessica Lockhart (Toronto)**

*From binding waste to birchbark codex:*

*Applications of micro-CT for non-invasive manuscript study*

Wednesday, 22 June, 4:45 pm – 6:15 pm

The potential of micro-computed tomography (Micro-CT) for the study of inaccessible texts has been amply demonstrated in recent years. However, whether ancient scroll or 'locked' letter, the objects for which this technology has been most successful in uncovering text tend to have certain features in common: a small size, enabling high resolution in the scanner, and ink with a high degree of contrast with the surrounding substrate, such as iron gall. When an object of study does not meet these ideal conditions, is microCT still a valuable tool?

This paper discusses the applications of micro-CT towards non-invasive textual study in two examples: binding waste in an early printed book at Western University in London, ON; and a fragile birchbark Śāradā-script manuscript donated to Williams College in 2020 and conserved by the Northeast Document Conservation Center. While Micro-CT can be used to demonstrate the presence of manuscript waste and to study it in situ, several technological hurdles must be overcome in order for Micro-CT to be at the point of wider uptake as a tool for non-invasive study of hidden texts. Fortunately, the example of the birchbark manuscript at Williams College may provide a promising testing-ground for this future work.

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**Fulvio Mercuri (Rome)**

*Thermographic detection and characterization of hidden texts in bookbinding*

Wednesday, 22 June, 2:45 pm – 4:15 pm

In recent years, thermography has proven to be an effective tool to detect and characterize subsurface elements of ancient bindings and, in particular, to provide the image of written parts

on waste materials buried under the book's pastedown. In addition to revealing the presence of the hidden written scraps, it is also of primary interest to be able to read them, possibly in high definition, without disassembling or damaging the binding. In this regard, thermography has proven to be a non-destructive technique, capable of providing a readable image of texts lying under one or more layers of paper or parchment. The most common configuration of this technique is the so-called pulsed thermography. In this method, the artefact is lighted by a flash lamp. The visible radiation, although diffuse, penetrates through the front layer of paper or parchment to the level of the text fragment where it is absorbed by the inked areas more effectively than by the surrounding non-inked ones. This induces local heating (about 1°C) and a resulting temperature distribution that is recorded by an infrared camera that provides a contrasting image of the hidden text and allows for a true thermal reading of the buried written elements.

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**Eliana Dal Sasso (Hamburg)**

*Uncovered manuscript fragments:*

*The effect of text-centred interest on the preservation of Coptic binding*

Thursday, 23 June, 2:30 pm – 4:00 pm

Reuse was widespread in Late Antique and Early Medieval Egyptian book production. Fragments of leaves from old, discarded books were often reused as sewing guards to reinforce the centrefolds of the quires or adhered together to provide stiff boards to the leather covering. Since researchers were interested in the content and language of ancient manuscripts, Coptic bindings were often subjected to invasive interventions to facilitate the handling of the leaves, and the boards could even be split to extract the ancient writing fragments. Unfortunately, the binding from which the fragment came was often not annotated. Thus, information on the provenance of many fragments is rather laconic.

The paper argues that the operation was detrimental to both the knowledge of book technology and the texts themselves. On the one hand, many Coptic bookbinding features have been irremediably lost and can no longer be reconstructed. On the other hand, much information about a text's use, diffusion, circulation, and discard lack context. Therefore, the paper advocates the development of a new research approach that, with the help of the natural sciences and digitisation techniques, can satisfy both textual and material interests, thus preserving Coptic bindings from further destruction.

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**Brent Seales (Kentucky) and Christy Chapman (Kentucky):**

*Virtual unwrapping as an approach to in-situ analysis of text within bindings*

Thursday, 23 June, 4:30 pm – 6:15 pm

The development of virtual unwrapping, which is based on the software analysis of volumetric images of damaged and unopened materials, has led to novel discoveries such as one of the oldest copies of Leviticus, written in Hebrew. Few are aware that the early development of virtual unwrapping was inspired by book bindings - in partial states of damage - containing text

cannabilized from earlier manuscripts. In this paper we discuss those initial successful experiments, which revealed a new reverse side (hidden) text from Ecclesiastes, written in Hebrew. We then frame what we think is a very promising set of future opportunities using virtual unwrapping for bindings and covers that are damaged and/or require analysis in situ, in the context of the advances we have made in technologies for scanning (x-ray tomography) and analysis (machine learning and artificial intelligence).

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**Ilaria Vezzosi (Bologna)**

*A hidden library of fragments and its conservation, a case study*

Thursday, 23 June, 2:30 pm – 4:00 pm

The paper presents the study I conducted in 2016 on seven 14th century Choirsbooks conserved in Penne (Pesaro) and the restoration of one of them as part of my master project.

The manuscripts had attracted the attention of scholars for having been repaired during the 18th century with a large number of parchment fragments, most of which were handwritten recto-verso and coming from ancient codices. They were used to close tears, cuts and ruptures on pages.

The Antiphonary B was chosen among the Choirsbooks because of its brittle state of conservation. During its restoration, the fragments had to be detached since the glue used to paste them had contributed to a substantial deformation of the parchment leaves. The operation made the corpus of fragments fully legible. However, it was decided to reinsert the detached fragments in the exact position they were previously located, contrary to the usual practice of separating the fragments from the host codex. The paper argues that the recto-verso digitization of each fragment legitimized this operation, which guaranteed scholars secure access to the text. Furthermore, it offered photographic evidence as an alternative to the direct use of the original.